

F263ext79  
SEQUENCE LISTING

<110> COMMISSARIAT A L'ENERGIE ATOMIQUE  
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE  
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VERNET Thierry  
MOUZ Nicolas

<120> STREPTOCOCCUS PNEUMONIAE PBP2X MINI-PROTEIN AND USES THEREOF.

<130> F263FR79s

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<160> 9

<170> PatentIn Ver. 2.1

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<211> 551

<212> PRT

<213> Streptococcus pneumoniae

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Gly Gln Phe Ala Ser Ser Phe Ile Gly Gly Gly Met Glu Ser Ser Leu
          35           40           45
Asn Ser Ile Leu Ala Gly Gly Gly Gly Asp Gly Lys Asp Val Tyr Thr
          50           55           60
Thr Ile Ser Ser Pro Leu Gln Ser Phe Met Glu Thr Gln Met Asp Ala
          65           70           75           80
Phe Gln Glu Lys Val Lys Gly Lys Tyr Met Thr Ala Thr Leu Val Ser
          85           90           95
Ala Lys Thr Gly Glu Ile Leu Ala Thr Thr Gln Arg Pro Thr Phe Asp
          100          105          110
Ala Asp Thr Lys Glu Gly Ile Thr Glu Asp Phe Val Trp Arg Asp Ile
          115          120          125
Leu Tyr Gln Ser Asn Tyr Glu Pro Gly Ser Thr Met Lys Val Met Met
          130          135          140
Leu Ala Ala Ala Ile Asp Asn Asn Thr Phe Pro Gly Gly Glu Val Phe
          145          150          155          160
Asn Ser Ser Glu Leu Lys Ile Ala Asp Ala Thr Ile Arg Asp Trp Asp
          165          170          175
Val Asn Glu Gly Leu Thr Gly Gly Arg Thr Met Thr Phe Ser Gln Gly
          180          185          190
Phe Ala His Ser Ser Asn Val Gly Met Thr Leu Leu Glu Gln Lys Met
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Gly Asp Ala Thr Trp Leu Asp Tyr Leu Asn Arg Phe Lys Phe Gly Val  
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 Pro Thr Arg Phe Gly Leu Thr Asp Glu Tyr Ala Gly Gln Leu Pro Ala  
 225 230 235 240  
 Asp Asn Ile Val Asn Ile Ala Gln Ser Ser Phe Gly Gln Gly Ile Ser  
 245 250 255  
 Val Thr Gln Thr Gln Met Ile Arg Ala Phe Thr Ala Ile Ala Asn Asp  
 260 265 270  
 Gly Val Met Leu Glu Pro Lys Phe Ile Ser Ala Ile Tyr Asp Pro Asn  
 275 280 285  
 Asp Gln Thr Ala Arg Lys Ser Gln Lys Glu Ile Val Gly Asn Pro Val  
 290 295 300  
 Ser Lys Asp Ala Ala Ser Leu Thr Arg Thr Asn Met Val Leu Val Gly  
 305 310 315 320  
 Thr Asp Pro Val Tyr Gly Thr Met Tyr Asn His Ser Thr Gly Lys Pro  
 325 330 335  
 Thr Val Thr Val Pro Gly Gln Asn Val Ala Leu Lys Ser Gly Thr Ala  
 340 345 350  
 Gln Ile Ala Asp Glu Lys Asn Gly Gly Tyr Leu Val Gly Leu Thr Asp  
 355 360 365  
 Tyr Ile Phe Ser Ala Val Ser Met Ser Pro Ala Glu Asn Pro Asp Phe  
 370 375 380  
 Ile Leu Tyr Val Thr Val Gln Gln Pro Glu His Tyr Ser Gly Ile Gln  
 385 390 395 400  
 Leu Gly Glu Phe Ala Asn Pro Ile Leu Glu Arg Ala Ser Ala Met Lys  
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 Asp Ser Leu Asn Leu Gln Thr Thr Ala Lys Ala Leu Glu Gln Val Ser  
 420 425 430  
 Gln Gln Ser Pro Tyr Pro Met Pro Ser Val Lys Asp Ile Ser Pro Gly  
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 Asp Leu Ala Glu Glu Leu Arg Arg Asn Leu Val Gln Pro Ile Val Val  
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 Gly Thr Gly Thr Lys Ile Lys Asn Ser Ser Ala Glu Glu Gly Lys Asn  
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 485 490 495  
 Val Pro Asp Met Tyr Gly Trp Thr Lys Glu Thr Ala Glu Thr Leu Ala  
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 Lys Trp Leu Asn Ile Glu Leu Glu Phe Gln Gly Ser Gly Ser Thr Val  
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Gln Lys Gln Asp Val Arg Ala Asn Thr Ala Ile Lys Asp Ile Lys Lys  
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Ile Thr Leu Thr Leu Gly Asp  
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